Reza Mahjourian

EDUCATION

UNIV. OF TEXAS AT AUSTIN
PhD in Computer Science
2018 | GPA: 4.0

SHARIF UNIV. OF TECH.
BS in Computer Eng.
Tehran, Iran

SKILLS

A.I. RESEARCH
Robotics • Foundation Models • Computer Vision • Reinforcement Learning • Evolutionary Strategies

SOFTWARE ENGINEERING
Programming:
Python • TensorFlow • C++
Databases:
PostgreSQL, PL/pgSQL
Linux:
Bash Scripting • Sed • AWK.

OPEN SOURCE

Organized **Waymo Open Dataset** Occupancy and Flow Prediction Challenge **CVPR 2022** , **CVPR 2024** , Scenario Generation Challenge **CVPR 2025**
GameGraph : Studies impact of domain stochasticity and ergodicity on RL. **2011**
Discovery : Evolutionary feature discovery for RL. **2011**
OpenNERO : Platform for A.I. research and education. **2014**
Master-Worker : **C++** **Python** : Library for coordinating cluster workers through a shared file system. **2016**
XPage : Light-weight web framework, transforms high-level page specs in XML to server-side scripts using XSLT.

EXPERIENCE

WAYMO AI FOUNDATIONS TEAM | Staff Research Scientist
Jul 2019 - present | Mountain View, CA

- Trained high-saliency Gemini models for self-driving tasks, improved metrics by 5.8% (**19.9% for pedestrians**).
- Employed VLMs and LLMs for visual trajectory prediction **ECCV 2024**
- Collaborated with DeepMind Robotics on high-speed robotics learning **RSS 2023** , achieving human-level competitive robot table tennis **ICRA 2025** , **Videos** using hierarchical and modular policies **PhD Dissertation** .
- Tech lead for scalable occupancy and trajectory prediction: StopNet **ICRA 2022** , patent, Occupancy Flow Fields **RA-L 2022** , patent, Modeling multi-agent interactions **ICRA 2021** , patent, used in **Waymo Open Motion Dataset** , Multi-agent scenario generation **ICRA 2024** , and BEV modeling for 3D Perception **WACV 2024**
- Trained instance segmentation models with contrastive learning **IROS 2022** patent, and efficient semantic segmentation models. **ArXiv 2022**

GOOGLE BRAIN ROBOTICS | Student Researcher
Sep 2017 - Nov 2018 | Mountain View, CA

- Sample-efficient reinforcement learning of robot table tennis with self-play in a VR environment. **ArXiv 2018** , **Website** . The hierarchical and modular policy design was adopted in a multi-year project leading to achieving human-level competitive robot table tennis **ICRA 2025** , **Videos** .
- Unsupervised learning of object depth and motion from raw monocular videos. **AAAI 2019** , **CVPR 2019** , patent, **Website** , **Google AI Blog** .
- Future semantic segmentation using 3D structure, **ECCV 2018** , patent.
- Published the **Bike Video dataset**
- Added computer vision library functions to **TensorFlow**

GOOGLE BRAIN ROBOTICS | Research Intern
May 2017 - Aug 2017 | Mountain View, CA

- Developed novel self-supervised learning method for depth and ego-motion from monocular videos. **CVPR 2018** , **Website** , patent, patent, patent.
- Developed custom TensorFlow op for aligning 3D point clouds during training.

GOOGLE BRAIN | Research Intern
May 2016 - Aug 2016 | Mountain View, CA

- Geometry-based next frame prediction from monocular video.
- IEEE Intelligent Vehicles Symposium 2017 **Paper** , patent, patent.

GOOGLE | Software Engineering Intern
Jun 2015 - Aug 2015 | Mountain View, CA

- Created a sparse-feature deep learning model for Google's ad publishing platform using DistBelief. Improved performance by 1.38% over existing model.
- Added support for Capacitor files to DistBelief (now TensorFlow).

TEAMUP | Start-up Lead Developer
Jul 2009 - Dec 2009 | London, UK

- Created a Django web app for managing fitness and sports businesses.
- Led the project from inception to beta release **Website**